

List of claims

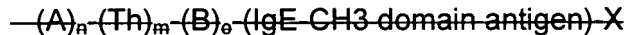
1. (Canceled)
2. (Canceled)
3. (Currently Amended) A synthetic peptide of about 50 to about 90 amino acids, which comprises
 - (a) a helper T cell epitope (Th),
 - (b) an IgE-CH3 domain antigen peptide, wherein said IgE-CH3 domain antigen peptide i) is between about 25 and about 29 amino acids in length ii) contains two cysteine residues separated by about 23 amino acid residues, and iii) is selected from the group consisting of SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:84 or an immunologically functional analog thereof, wherein from one to four of the residues in SEQ ID NO:5 is conservatively substituted or deleted; and optionally
 - (c) an immunostimulatory invasin domain, SEQ ID NO: 13.

4. (Canceled).

5. (Withdrawn) A peptide conjugate represented by the formula



or



wherein

~~each A is independently an amino acid or an immunostimulatory invasin domain, SEQ ID NO: 13;~~

~~each B is chosen from the group consisting of amino acids,~~

~~NHCH(X)CH₂SCH₂CO-, NHCH(X)CH₂SCH₂CO(ε-N)Lys-,~~

~~NHCH(X)CH₂S-succinimidyl(ε-N)Lys-, and NHCH(X)CH₂S-(succinimidyl)-;~~

~~each Th is independently a sequence of amino acids that constitutes a helper T cell epitope, or an immune enhancing analog or segment thereof;~~

~~IgE-CH3 domain antigen represents the sequence of an IgE-CH3 domain antigen peptide, wherein said IgE-CH3 domain antigen peptide i) is between about 25 and about 29 amino acids in length ii) contains two cysteine residues separated by about 23 amino acid residues, and iii) is selected from the group consisting of SEQ ID NO:5, SEQ ID NO:6,;~~

~~X is an amino acid α -COOH or α -CONH₂;~~

~~n is from 0 to about 10;~~

~~m is from 1 to about 4; and~~

~~o is from 0 to about 10.~~

6. (Withdrawn) A peptide conjugate represented by the formula

~~—(IgE-CH3 domain antigen)-(B)_o-(Th)_m-(A)_n-X~~

~~or~~

~~—(Th)_m-(B)_o-(IgE-CH3 domain antigen)-(A)_n-X~~

~~wherein~~

~~each A is independently an amino acid or an immunostimulatory invasin domain, SEQ ID NO: 13~~

~~each B is chosen from the group consisting of amino acids,—~~

~~NHCH(X)CH₂SCH₂CO,—NHCH(X)CH₂SCH₂CO(ϵ -N)Lys,—~~

~~—NHCH(X)CH₂S-succinimidyl(ϵ -N)Lys,— and —NHCH(X)CH₂S-(succinimidyl);~~

~~each Th is independently a sequence of amino acids that constitutes a helper-T cell epitope, or an immune enhancing analog or segment thereof;~~

~~IgE-CH3 domain antigen represents the sequence of an IgE-CH3 domain antigen peptide, wherein said IgE-CH3 domain antigen peptide i) is between about 25 and about 29 amino acids in length ii) contains two cysteine residues separated by about 23 amino acid residues, and iii) is selected from the group consisting of SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:84 or an immunologically functional analog thereof, wherein from one to four of the residues in SEQ ID NO:5 is conservatively substituted or deleted;~~

~~X is an amino acid α -COOH or α -CONH₂;~~

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~~n is from 0 to about 10;~~
~~m is from 1 to about 4; and~~
~~e is from 0 to about 10.~~

7. (Currently amended) A synthetic peptide of claim 3 ~~conjugate of any one of claims 4-6~~ wherein said Th is an SSAL.
8. (Withdrawn) A ~~peptide conjugate of any one of claims 4-6~~ wherein said IgE-CH3 domain antigen peptide has an amino acid sequence selected from the group consisting of SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, and SEQ ID NO:84.
9. (Withdrawn) A ~~peptide conjugate of claim 7~~ wherein said IgE-CH3 domain antigen peptide has an amino acid sequence selected from the group consisting of SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, and SEQ ID NO:84.
10. (Currently Amended) A synthetic peptide conjugate of any one of claims 4-6 ~~od claim 3~~ wherein said Th has an amino acid sequence selected from the group consisting of SEQ ID NOS: 9-12 and SEQ ID NOS: 61-82 and 89.
11. (Withdrawn) A ~~peptide conjugate of claim 7~~ wherein said Th has an amino acid sequence selected from the group consisting of SEQ ID NOS: 9-12 and SEQ ID NOS: 60-82 and 89.
12. (Withdrawn) A ~~peptide conjugate of claim 8~~ wherein said Th has an amino acid sequence selected from the group consisting of SEQ ID NOS: 9-12 and SEQ ID NOS: 60-82 and 89.
13. (Withdrawn) A ~~peptide conjugate of claim 9~~ wherein said Th has an amino acid sequence selected from the group consisting of SEQ ID NOS: 9-12 and SEQ ID NOS: 60-82 and 89.

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14. (Canceled)
15. (Canceled)
16. (Withdrawn) ~~A peptide conjugate of claim 5 or 6 wherein n is 3, and (A)₃ is (invasin domain, SEQ ID NO: 13) Gly-Gly.~~
17. (Canceled)
18. (Canceled) .
19. (Canceled)
20. (Canceled)
21. (Canceled)
22. (Canceled) ~~A branched polymer comprising a lysine, tryllysine, or heptalysine core, covalently attached to two, four, or eight peptide conjugates, respectively, of any one of claims 45-6 or 14.~~
23. (Withdrawn) .
24. (Previously Amended) A pharmaceutical composition comprising an immunologically effective amount of a peptide or peptide conjugate of any one of claims 5-6 and a pharmaceutically acceptable carrier.
25. (Canceled)
26. (Canceled)
27. (Canceled)
28. (Canceled)